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The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 (Currently Amended): An electrical mounting board comprising:

a substrate having a plurality layers configured such that a substrate core lies between the layers;

a first layer having formed thereon a plurality of bi-directionally oriented electrical ground traces arranged in a hybrid configuration so that a first group of electrical ground traces is arranged in a transverse relationship with a second group of electrical ground traces and wherein the first layer includes longitudinal spaces between the ground traces enabling signal traces to be formed thereon;

a second layer having formed thereon a plurality of bi-directionally oriented electrical ground traces arranged in a hybrid configuration so that a third group of electrical ground traces is arranged in a transverse relationship with a fourth group of electrical ground traces and wherein the second layer includes longitudinal spaces between the ground traces enabling signal traces to be formed thereon;

a set of electrically conductive interconnects that pass through the substrate core to electrically connect electrical ground traces of the first layer with electrical ground traces of the second layer to form a multi-layer ground grid having a plurality of ringlets; and

at least one of electrical contacts and signal traces formed on the longitudinal spaces between the electrical ground traces of at least one of the first and second layers.

2 (Original): An electronic device incorporating the board of Claim 1.

3 (Original): The board of Claim 1 wherein the electrical board comprises a two layer board wherein the first layer comprises a top layer of the board and wherein the second layer comprises a bottom layer of the board.

4 (Original): The board of Claim 1 wherein the electrical board comprises a board having at least three layers.

5 (Original): The board of Claim 1 wherein electronic components are mounted on the board and electrically connected with the at least one of electrical contacts and signal traces.

6 (Original): The board of Claim 5 wherein electrical signal is provided to an electronic component using a signal trace;

wherein the electronic component is electrically connected with an associated ringlet; and
wherein the signal trace is configured so that it is positioned near the associated ringlet.

7 (Currently Amended): The board of Claim 6 wherein an electrical current path defined by the signal trace and a return path [[trough]] through an associated ringlet is configured to minimize the loop area defined by the electrical current path.

8 (Original): The board of Claim 1 wherein the plurality of electrical ground traces of the first layer overlay the plurality of electrical ground traces of the second layer to form a multi-layer grid having a plurality of ringlets configured such that the density of the ringlets is related to one of the anticipated or measured electromagnetic noise of circuitry and electrical components mounted on the board.

9 (Original): The board of Claim 1 wherein the ringlets are formed having different sizes at different areas of the board.

10 (Currently Amended): An electrical mounting board comprising:

a substrate having a plurality layers configured such that a substrate core lies between the layers;

a first layer having a first portion and having a second portion, the layer having formed thereon,

a plurality of first ground traces and first signal traces arranged on the first portion of the first layer, the first ground traces extending parallel to a first axis defining first trace surfaces between the first ground traces, the first signal traces formed on the first trace surfaces between the first ground traces; and

a plurality of second ground traces and second signal traces arranged on the second portion of the first layer, the second ground traces extending parallel to a second axis that lies transverse to the first axis, the second ground traces defining second trace surfaces between the second ground traces, the second signal traces formed on the second trace surfaces between the second ground traces;

a second layer arranged below the first layer, the second layer including a third portion below the first portion of the first layer and a fourth portion below the second portion of the first layer, the second layer having formed thereon,

a plurality of third ground traces and third signal traces arranged on the third portion of the second layer, the third ground traces extending parallel to a third axis that lies transverse to the first axis, the third ground traces defining third trace surfaces between the third ground traces, the third signal traces formed on the third trace surfaces between the third ground traces;

a plurality of fourth ground traces and fourth signal traces arranged on the fourth portion of the second layer, the fourth ground traces extending parallel to a fourth axis that lies transverse to the third axis, the fourth ground traces defining fourth trace surfaces between the fourth ground traces, the fourth signal traces formed on the fourth trace surfaces between the fourth ground traces; and

a set of electrically conductive interconnects that pass through the substrate core to electrically connect electrical ground traces of the first layer with electrical ground traces of the second layer to form a multi-layer ground grid having a plurality of ringlets.

~~a substrate having a plurality layers configured such that a substrate core lies between the layers;~~

~~a first layer having formed thereon a plurality of electrical ground traces configured in at least two groups arranged in a hybrid configuration so that a first group of substantially parallel electrical ground traces is arranged in a transverse relationship with a second group of substantially parallel electrical ground traces;~~

~~a second layer having formed thereon a plurality of electrical ground traces configured in at least two groups arranged in a hybrid configuration so that a third group of substantially parallel electrical ground traces is arranged in a transverse relationship with a fourth group of substantially parallel electrical ground traces;~~

~~a set of electrically conductive interconnects that pass through the substrate core to electrically connect electrical ground traces of the first layer with electrical ground traces of the second layer to form a multi layer ground grid having a plurality of ringlets; and
signal traces formed on at least one of the first and second layers.~~

11 (Original): An electronic device incorporating the board of Claim 10.

12 (Original): The electronic device of Claim 10 wherein the device comprises a computer.

13 (Original): The board of Claim 10 wherein the electrical board comprises a two layer board wherein the first layer comprises a top layer of the board and wherein the second layer comprises a bottom layer of the board.

14 (Original): The board of Claim 13 wherein electronic components are mounted on at least one of the first and second layers and electrically connected with the signal traces and electrically grounded to the ground traces of the board.

15 (Original): The board of Claim 14 wherein the ringlets are located adjacent to the signal traces that electrically connect to the electronic components.

16 (Original): The board of Claim 10 wherein the electrical board comprises a multi-layer board having at least three layers.

17 (Currently Amended): The board of Claim 10 wherein ~~the plurality of electrical~~ ground traces of the first layer overlay ~~the plurality of electrical~~ ground traces of the second layer to form a multi-layer ground grid having a plurality of ringlets configured in substantially square arrangements.

18 (Currently Amended): The board of Claim 10 wherein the ~~plurality of electrical~~ ground traces of the first layer overlay the ~~plurality of electrical~~ ground traces of the second layer to form a multi-layer ground grid having a plurality of ringlets configured in substantially diamond-shaped arrangements.

19 (Currently Amended): ~~The board of Claim 10~~ An electrical mounting board comprising:
a substrate having a plurality layers configured such that a substrate core lies between
the layers;

a first layer having formed thereon a plurality of electrical ground traces configured in
at least two groups arranged in a hybrid configuration so that a first group of substantially
parallel electrical ground traces is arranged in a transverse relationship with a second group
of substantially parallel electrical ground traces;

a second layer having formed thereon a plurality of electrical ground traces configured
in at least two groups arranged in a hybrid configuration so that a third group of substantially
parallel electrical ground traces is arranged in a transverse relationship with a fourth group of
substantially parallel electrical ground traces wherein the plurality of electrical ground traces of the first layer overlay the plurality of electrical ground traces of the second layer to form a multi-layer ground grid having a plurality of ringlets configured in substantially triangular arrangements;

a set of electrically conductive interconnects that pass through the substrate core to
electrically connect electrical ground traces of the first layer with electrical ground traces of
the second layer to form a multi-layer ground grid having a plurality of ringlets; and
signal traces formed on at least one of the first and second layers.

20 (Currently Amended): The board of Claim 10 wherein the ~~plurality of electrical~~ ground traces of the first layer overlay the ~~plurality of electrical~~ ground traces of the second layer to form a multi-layer ground grid having a plurality of ringlets configured such that the density of the ringlets is associated with the electrical components mounted with the board.

21 (Original): The board of Claim 10 wherein the signal traces are electrically connected with associated electronic components mounted on the board.

22 (Currently Amended): The board of Claim 21 wherein the signal traces ~~hybrid configurations of electrical ground traces~~ on the first layer and the second layer are arranged to accommodate the arrangement of the ground traces ~~signal traces~~ and the associated electronic components that are mounted on the board.

23 (Original): The board of Claim 22 wherein electronic components include electromagnetic field sensitive components whose mode of operation is sensitive to variations in electromagnetic fields and wherein said plurality of ringlets are positioned underneath the electromagnetic field sensitive components to reduce the effects of undesirable electromagnetic emission.

24 (Original): The board of Claim 23 wherein at least one of the electromagnetic field sensitive components comprises a track pad and wherein a plurality of the ringlets are positioned underneath the track pad.

25-31 (Cancelled).

32 (New): The board of Claim 1 wherein the number of ground traces is greater than the number of electrical intersections between the ground traces.

33 (New): The board of Claim 10 wherein
the third ground traces of the second layer define third trace surfaces between the third ground traces and third signal traces are formed on the third trace surfaces between the third ground traces; and
the fourth ground traces of the second layer define fourth trace surfaces between the fourth ground traces and fourth signal traces are formed on the fourth trace surfaces between the fourth ground traces.

34 (New): The board of Claim 33 wherein

the first trace surfaces defined by the first ground traces comprise first elongate surfaces such that the a portion of the first signal traces extend parallel to the first ground traces;

the second trace surfaces defined by the second ground traces comprise second elongate surfaces such that the a portion of the second signal traces extend parallel to the second ground traces;

the third trace surfaces defined by the third ground traces comprise third elongate surfaces such that the a portion of the third signal traces extend parallel to the third ground traces; and

the fourth trace surfaces defined by the fourth ground traces comprise fourth elongate surfaces such that the a portion of the fourth signal traces extend parallel to the fourth ground traces.

35 (New): An electrical mounting board comprising:

a substrate having a plurality layers configured such that a substrate core lies between the layers;

a first layer having formed thereon

a plurality of electrical ground traces configured in at least two groups arranged in a hybrid configuration so that a first group comprises a first set of ground traces arranged in a first comb pattern of substantially parallel electrical first ground traces having a first and second end ground trace at each end of the comb pattern that are arranged in a transverse relationship with a second group comprising a second set of ground traces arranged in a second comb pattern of substantially parallel electrical second ground traces and wherein the first ground traces intersect with the second set of ground traces only at the first end ground trace of the second set of ground traces forming a first set of intersections;

a second layer having formed thereon

a plurality of electrical ground traces configured in at least two groups arranged in a hybrid configuration so that a third group comprises a third set of ground traces arranged in a third comb pattern of substantially parallel electrical third ground traces having a first and

second end ground trace at each end of the comb pattern that are arranged in a transverse relationship with a fourth group comprising a fourth set of ground traces arranged in a fourth comb pattern of substantially parallel electrical fourth ground traces and wherein the third ground traces intersect with the fourth set of ground traces only at the first end ground trace of the fourth set of ground traces forming a second set of intersections;

a set of electrically conductive interconnects that pass through the substrate core to electrically connect the ground traces of the first layer with the ground traces of the second layer to form a multi-layer ground grid having a plurality of ringlets; and

signal traces formed on at least one of the first layer and the second layer between the ground traces of the at least one of the first and second layers.

36 (New): The board of Claim 35 wherein the first layer is configured in at least three groups arranged in a hybrid configuration so that the first group and the second group include a further fifth group comprising a fifth set of ground traces arranged in a fifth comb pattern of substantially parallel electrical fifth ground traces, wherein the fifth group is arranged in a transverse relationship with the second group and wherein the fifth ground traces intersect with the second set of ground traces only at the second end ground trace of the second set of ground traces forming a third set of intersections; and

wherein the second layer is configured in at least three groups arranged in a hybrid configuration so that the third group and the fourth group include a further sixth group comprising a sixth set of ground traces arranged in a sixth comb pattern of substantially parallel electrical sixth ground traces, wherein the sixth group is arranged in a transverse relationship with the fourth group and wherein the sixth ground traces intersect with the fourth set of ground traces only at the second end ground trace of the fourth set of ground traces forming a fourth set of intersections.

37 (New): The board of Claim 35

wherein the first layer is configured in at least three groups arranged in a hybrid configuration so that the first group and the second group include a further seventh group comprising a seventh set of ground traces arranged in a seventh comb pattern of substantially

parallel electrical seventh ground traces, wherein the seventh group is arranged in a transverse relationship with the first group and wherein the first ground traces intersect with the seventh set of ground traces only at an end ground trace of the seventh set of ground traces forming a fifth set of intersections; and

wherein the second layer is configured in at least three groups arranged in a hybrid configuration so that the third group and the fourth group include a further eighth group comprising a eighth set of ground traces arranged in a eighth comb pattern of substantially parallel electrical eighth ground traces, wherein the eighth group is arranged in a transverse relationship with the third group and wherein the third ground traces intersect with the eighth set of ground traces only an end ground trace of the eighth set of ground traces forming a sixth set of intersections.